

CAMERA HARDWARE

MODEL: RICOH WG-20 Black

TYPE: Compact Digital Camera

SENSOR

Type: 1/2.3" interline transfer CCD w primary color filter

Effective pixels: 14

Total pixels: 14.48

Recorded resolutions

Still: 14M (4288x3216), 10M (1:1, 3216x3216), 10M (16:9, 4224x2376), 7M (3072x2304), 5M (16:9, 3072x1728), 5M (2592x1944), 4M (16:9, 2592x1464), 3M (2048x1536), 2M (16:9, 1920x1080), 1024 (1024x768), VGA (640x480)

Movie: HD (1280x720p30/15), VGA (640x480p30/15), QVGA (320x240p30/15)

Quality levels: ★★★ best, ★★ better, ★ good, Movie: Fixed

LENS

Type/construction: RICOH zoom lens, 11 elements, 9 groups (5 aspheric elements), protective cover w SP coating

Optical zoom: 5X

Focal length (equiv.): 5-25mm (28-140mm)

Digital zoom: 6.7X

Combined zoom: 33.5X at 640 (including optical zoom)

Intelligent zoom: Approx 7.0X at 7M to 33.5X at VGA

Aperture: F3.5 (wide) - 5.5 (tele). Minimum aperture: F4.2 (wide), F6.6 (tele)

LCD/VIEWFINDER

LCD screen: 2.7" widescreen TFT color LCD w/ anti-reflective coating on cover

LCD resolution: 230,000 dots

Wide angle viewable: Yes

Viewfinder: n/a

FOCUS SYSTEM

Type: TTL contrast detection autofocus, AF assist lamp, Macro Illuminating LEDs

Focus modes: 9 point AF, Spot AF, Auto Tracking AF, Macro, 1CM Macro, Infinity Landscape, Pan Focus, Manual Focus

Manual focus: Yes, 0.4" to infinity (0.4" is only available in 2-4 zoom steps)

Macro focus: Yes, Macro and 1CM Macro available

Focus lock: Yes, by pressing the shutter release button half way

Focus range

Normal: 1.64' to infinity (entire zoom range)

Macro: 0.33 to 1.97' (entire zoom range)

1 CM Macro: 0.03 (1cm) to 0.98' (at mid-zoom, set automatically) 0.4x mag.

FLASH

Type: Built-in series control auto flash

Flash modes: Auto, Flash Off, Flash On, Auto + Redeye

Effective range: 13' (**wide**, auto ISO), 8.2' (**tele**, auto ISO)

STORAGE MEDIA

Internal memory: 97MB

Removable memory: SD, SDHC, SDXC

INTERFACES

Ports: USB2.0(Hi-Speed): PC/AV terminal, HDMI terminal (Type D)

Video out: NTSC, PAL

Printer interfaces: n/a

POWER SUPPLY

Power source: Rechargeable Li-Ion battery D-LI92

Recordable images: Approx 260

Playback time: Approx 280 min

Movie recording time: Approx 120 min

Audio recording time: Approx 350 min

AC adapter available: Yes (optional)

PHYSICAL SPECIFICATIONS

Dimensions (W x H x D): 4.5 x 2.3 x 1.1"

Weight

Without battery or removable memory: 5.0 oz

Loaded and ready: 5.8 oz

Construction material(s): **Reinforced polycarbonate plastic w aluminum accents**

Operating temperature: 14-104°F (coldproof)

Weather Resistant: Yes, JIS Class 8 waterproof submersible to 33', JIS Class 6 dustproof

Shock Resistant: Yes, shockproof to 4.9'

TIMING

Startup: Approx 1.3 sec

Release lag: Approx 0.037 sec

LANGUAGE SUPPORT

English, French, German, Spanish, Portuguese, Italian, Dutch, Japanese, Danish, Swedish, Finnish, Polish, Czech, Hungarian, Turkish, Greek, Russian, Thai, Korean, Simplified Chinese, Traditional Chinese

KIT COMPONENTS

RICOH WG-20, USB Cable I-USB7, Rechargeable Li-Ion Battery D-LI92(A), PENTAX AC PLUG CORD D-CO24J, PENTAX POWER ADAPTER D-PA135J, Strap O-ST104, Carabiner Strap O-ST147, Software CD-ROM S-SW-147

OPTIONAL ACCESSORIES

AC Adapter Kit K-AC117U, Remote Control WP, Remote Control O-RC1, E, F,
Pentax AV Cable I-AVC7

IMAGE CAPTURE

IMAGE STABILIZATION

Still: Pixel Track SR, High-Sensitivity anti-shake mode (Digital SR)
Movie: Movie Shake Reduction Mode (Movie SR)

METERING SYSTEM

Type: TTL
Multi-segment: Yes
Center weighted: Yes
Spot: Yes
Exposure compensation: +/- 2 EV (1/3 steps)

ISO SENSITIVITY

Auto, Manual (ISO 80 – 6400)

WHITE BALANCE

Auto, Daylight, Shade, Tungsten light, Fluorescent light, Manual Setting

SHUTTER

Type: Programmed AE electronic lens shutter with CCD electronic shutter
Shutter speed: 1/1500 to 1/4 sec (up to 4 sec in Night Scene mode)

CAPTURE MODES

Scene Mode selection: Auto Picture, Program, Night Scene, Movie, Underwater, Underwater Movie, Digital Microscope, Landscape, Flower, Portrait, Digital Wide, Digital SR, Surf & Snow, Kids, Pet, Sport, Fireworks, Candlelight, Night Scene Portrait, Text, Food, Digital Panorama, Frame Composite, Report, Green, Voice Recording (via reproprogrammable Green button)
Green simplified mode available: Yes
Face detection available: Yes (up to 32 faces), Smile Capture, Blink Detection, Self Portrait Assist, Pet Recognition (1 face detect, 3 faces pre-registered)
P/A/S/M/B: P
Date stamp: Yes, date, date-time, time (not available in Green mode)
Digital filters (capture): Image Tone (Bright, Natural, Monochrome)
Dynamic Range Adjustment: Yes (highlight and shadow correction)

DRIVE MODES

Mode selection: One Shot, Self-Timer, Continuous, Burst (5M or 4M), Remote Control, Interval, Auto Bracket
Continuous Shooting: Approx. 0.68 FPS
High-speed Continuous Shooting: 2.27 FPS for 19 frames (5M or 4M)
5.26 FPS for 19 frames at ISO 3200-6400 (5M or 4M)
Self-timer: Yes (10s, 2s), Remote Control (immediate, 3s)
Remote control: Yes (infrared, optional)

PLAYBACK MODES

Mode selection: One Shot, Index (6 or 12 thumbnails), Magnification, Movie Playback, Sound Playback, Histogram, Folder Display, Select & Delete, Calendar
Mode pallet: Slideshow, Image Rotation, Small Face Filter, Ink Rubbing Filter, Collage, Digital Filter(B&W / Sepia, Toy Camera, Retro, Color, Extract Color, Color Emphasis, High Contrast, Starburst, Soft, Fish-eye, Brightness Filter, Miniature), Original Frame, Frame Composite, Movie Edit, Red-eye Compensation, Resize, Cropping, Image/Sound Copy, Voice Memo, Protect, DPOF, Startup Screen, Face close up playback.
Magnification: Up to 10X, scrollable
Digital filters (playback): B&W/Sepia, Toy Camera, Retro, Color, Color Extract, Color Emphasis, High Contrast, Starburst, Soft, Fisheye, Brightness, Miniature
Movie edit: Save as Still Image, Movie Divide, Add Title Picture

FILE FORMATS

Still: JPG (EXIF 2.3), DCF 2.0, DPOF, PRINT Image compatible
Movie (compression): AVI (Motion JPG) with sound
Sound: WAV (PCM), monaural

FILE STORAGE MATRIX (BASED ON 2GB MEMORY)/Built-in Memory

STILL	★★★	★★	★
14M (4288x3216)	394/19	778/39	1205/61
10M (3216x3216) 1:1	487/24	975/49	1397/70
10M (4224x2376) 16:9	487/24	975/49	1397/70
7M (3072x2304)	653/33	1205/61	1617/81
5M (3072x1728) 16:9	778/39	1499/75	2119/81
5M (2592x1944)	778/39	1499/75	2119/81
4M (2592x1464) 16:9	975/49	1921/98	2927/151
3M (2048x1536)	1205/61	2364/121	3415/177
2M (1920x1080) 16:9	1756/90	3415/177	4726/236
1280 (1280x960)	2794/141	5122/258	6830/365
1024 (1024x768)	4098/214	6830/365	8782/477
VGA (640x480)	8782/443	12294/690	15368/776
MOVIE (H:M:S)	30 FPS	15 FPS	
HD 720p	00:10:08	00:19:42	
VGA	00:29:16	00:53:55	
QVGA	00:44:32	01:18:48	
SOUND (H:M:S)	8:44:34		

*The maximum file size for a movie is 2GB.

**The maximum length for voice recording is 18 hours.

COMPUTER SYSTEM REQUIREMENTS*

*For device connectivity. Bundled software requirements may vary.

Windows: Windows XP (SP3), Vista, 7, 8, USB port
Mac: MacOS X 10.4, 10.5, 10.6, 10.7, 10.8, USB port

